

WHAT IS CLAIMED IS:

1. A method for data security with lock in a hard disk and a solid state disk, comprising following steps:

a procedure for partitioning a disk drive into a plurality of disk zones;

5 offering a plurality of registers for indicating a record of a size of the respective partitioned disk zone; and

offering a procedure of mathematical operation for treating a user input data and a register data.

2. The method for data security with lock in a hard disk and a solid state disk according to claim 1, wherein the registers are a R_index register, a P_index register and a LBA_manupper register for indicating records of three disk zone sizes.

3. The method for data security with lock in a hard disk and a solid state disk according to claim 1, wherein the said disk zones are assigned as a user zone, a ROM zone and a protect zone.

4. The method for data security with lock in a hard disk and a solid state disk according to claim 2, wherein when the register $R_index \geq 1$ and the register $LBA_max > \text{the register } P_index > \text{the register } R_index$, the disk drive 1 is divided into three zones, the disk drive is divided into the user zone, the ROM zone and the protect zone.

5. The method for data security with lock in a hard disk and a solid state disk according to claim 2, wherein when the register $R_index \geq 1$ and the register $LBA_max = \text{the register } P_index > \text{the register } R_index$, the disk drive is divided into two zones, the user zone and the ROM zone.

6. The method for data security with lock in a hard disk and a solid state disk according to claim 2, wherein when the register $R_index \geq 1$ and the register

LBA_max > the register P_index = the register R_index, the disk drive 1 is divided into two zones, the user zone and the protect zone.

- 5 7. The method for data security with lock in a hard disk and a solid disk according to claim 2, wherein when the register R_index ≥ 1 and the register LBA_max = the register P_index = the register R_index, the disk drive is divided into the user zone.
8. The method for data security with lock in a hard disk and a solid state disk according to claim 1, wherein a password operation mode is by way of a mathematical operation with the user input data and the register data.